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EXAMINER	
SCHEIBEL, ROBERT C	
ART UNIT	**PAPER NUMBER**
2666	

DATE MAILED: 08/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/779,359	DURON, MIKE CONRAD	
	Examiner	Art Unit	
	Robert C. Scheibel	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

- Applicant's Amendment filed 2/7/2005 is acknowledged.
- Claims 1, 3, 13, 16, 19, 21, 31, 34, 39, 44, and 45 have been amended.
- Claims 1-45 are pending.

Response to Arguments

1. Applicant's arguments, see page 12, filed 2/7/2005, with respect to the objection to the abstract have been fully considered and are persuasive. The objection to the abstract has been withdrawn.

2. Applicant's arguments, see page 12, filed 2/7/2005, with respect to the objections to Figure 5 have been fully considered and are persuasive. The objections to Figure 5 have been withdrawn.

3. Applicant's arguments, see page 12, filed 2/7/2005, with respect to the objections to claims 3 and 21 have been fully considered and are persuasive. The objections to claims 3 and 21 have been withdrawn.

4. Applicant's arguments, see pages 12-16, filed 2/7/2005, with respect to the rejection of claims 1-45 under 35 U.S.C. 103(a) have been considered but are moot in view of the new ground of rejection in view of U.S. Patent 6,748,559 to Pfister et al. Additionally, the claims have been rejected under 35 U.S.C. 112, first paragraph, as they include new matter not supported by the specification as originally filed. See below for details of these rejections.

Claim Objections

5. Claims **1, 13, 16, 19, 31, 34, 39, 44 and 45** are objected to because of the following informalities:

- The phrase "each one of said set of paths" in lines 5 and 14-15 of claim 1 (and the corresponding phrase in similar locations of claims 19, 34, and 44) should be changed to "each ***path*** of said set of paths" for clarity.
- Similarly, the phrase "each one of said plurality of paths" in lines 5 and 13 of claim 13 (and the corresponding phrase in similar locations of claims 16, 31, 39, and 45) should be changed to "each ***path*** of said plurality of paths".
- The phrase "each one of said plurality of nodes" in lines 8-9 and 14 of claim 1 (and the corresponding phrase in similar locations of claims 13, 16, 19, 31, 34, 39, 44 and 45) should be changed to "each ***node*** of said set of nodes" for clarity.
- "pat" in line 5 of claim 13 should be "path".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims **1-45** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains new subject matter which was not

described in the specification as originally filed in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

Claims **1, 13, 16, 19, 31, 34, 39, 44 and 45** contain the limitations "each one of said plurality of nodes storing said time out value" (see lines 8-9 of claim 1 and the similar limitation in the other claims) and "setting the time out value in each one of said plurality of nodes in each one of said set of paths" (see lines 14-15 in claim 1 and the similar limitation in the other claims); this limitation is not supported by the specification as originally filed and as such is considered new matter. This limitation is not considered in the rejection below as it must be removed in order to overcome the present rejection.

Claims 2-12, 14-15, 17-18, 20-30, 32-33, 35-38, and 40-43 are dependent upon the above rejected claims and are thus rejected on the same grounds as they include this limitation implicitly.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims **13-15** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim **13** recites the limitation "said time for the data" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims **1-45** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,748,559 to Pfister et al.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claims **1, 19, 34, and 44**:

Pfister discloses a method in a data processing system for setting a time out (see Figure 7 for a general overview of the method), the method comprising: identifying a path from a set of paths from the data processing system to a destination to form an identified path (see lines 20-30 of column 9), wherein the identified path has a largest latency in the set of paths (clearly stated in

lines 21-23 of column 9 and again in lines 26-30 of column 9), each one of said set of paths being a different path from said data processing system to said destination (this is clearly implied in lines 63-65 of column 3; if the paths are to be used for either fault tolerance or increased-bandwidth data transfers, the paths must be different from one another).

Pfister further discloses the limitation of each path in said set of paths including a different plurality of a plurality of nodes through which data passes when said data is transmitted via said each path (again, this is clearly implied in lines 63-65 of column 3; if the paths are to be used for either fault tolerance or increased-bandwidth data transfers, the paths must be different from one another).

Pfister discloses the limitation of routing data to the destination using the identified path (see limes 13-15 of column 9; the SMP requests are data sent along each path). Pfister discloses the limitation of measuring latency for the data sent on the identified path to form a measured latency, said measured latency being a latency through a first plurality of nodes that are included in said identified path (lines 16-17 of column 9 and block 705 of Figure 7 which determines the SubnetTimeout for each path).

Finally, Pfister discloses setting the time out value using the measured latency (see lines 63-66 of column 9 and block 715 of Figure 7), wherein the time out value is used to initiate a computer implemented process (the "operation" started in block 715). The further limitations of claim 34 of a bus system, a communications unit connected to the bus system and a memory connected to the bus system, wherein the memory includes a set of instructions are disclosed in both the processor nodes and RAID subsystems of Figure 1 which are nodes running the SM discussed above.

Similarly, regarding claims **13, 31, 39, and 45**:

Pfister discloses a method in a data processing system for setting a time out value (see Figure 7 for a general overview of the method), the method comprising: sending data on a particular path within a plurality of paths to a destination (see limes 13-15 of column 9; the SMP requests are data sent along each path), wherein the particular path has a longest latency within the plurality of paths (clearly stated in lines 21-23 of column 9 and again in lines 26-30 of column 9), each one of said plurality of paths being a different path to said destination (this is clearly implied in lines 63-65 of column 3; if the paths are to be used for either fault tolerance or increased-bandwidth data transfers, the paths must be different from one another);

each path in said plurality of paths including a different plurality of a plurality of nodes through which data passes when said data is transmitted via said each path (again, this is clearly implied in lines 63-65 of column 3; if the paths are to be used for either fault tolerance or increased-bandwidth data transfers, the paths must be different from one another);

measuring a time for the data to reach the destination to form a measured time, said measured time being a time it takes said data to traverse through a first plurality of nodes that are included in said particular path (lines 16-17 of column 9 and block 705 of Figure 7 which determines the SubnetTimeout for each path);

and setting a time out value using the measured time (see lines 63-66 of column 9 and block 715 of Figure 7). The further limitations of claim 39 of a bus system, a communications unit connected to the bus system and a memory connected to the bus system, wherein the

memory includes a set of instructions are disclosed in both the processor nodes and RAID subsystems of Figure 1 which are nodes running the SM discussed above.

Similarly, regarding claim **16:**

Pfister discloses a network data processing system comprising: a network (SAN 113 of Figure 1); a destination node (any one of the nodes in Figure 1; see lines 50-53 of column 3) connected to the network;

and a source node connected to the network (any one of the nodes in Figure 1; see lines 50-53 of column 3) in which a plurality of paths are present from the source node to the destination node (see lines 61-65 of column 3), each one of said plurality of paths being a different path from said source node to said destination node (this is clearly implied in lines 63-65 of column 3; if the paths are to be used for either fault tolerance or increased-bandwidth data transfers, the paths must be different from one another), each path in said plurality of paths including a different plurality of a plurality of nodes through which data passes when said data is transmitted via said each paths (again, this is clearly implied in lines 63-65 of column 3; if the paths are to be used for either fault tolerance or increased-bandwidth data transfers, the paths must be different from one another);

wherein the source node routes data to the destination node through a selected path within the plurality of paths (see limes 13-15 of column 9; the SMP requests are data sent along each path) in which the selected path has a longest latency period (clearly stated in lines 21-23 of column 9 and again in lines 26-30 of column 9),

measuring latency of the data routed from the source node to the destination node to form a measured latency (lines 16-17 of column 9 and block 705 of Figure 7 which determines the SubnetTimeout for each path), said measured latency being a latency through a first plurality of nodes that are included in said selected path, and setting said time out value using the measured latency (see lines 63-66 of column 9 and block 715 of Figure 7).

Regarding claims **2-3, 14-15, 20-21 and 32-33**:

Pfister discloses the limitation that the step of setting the time out value using the measured latency comprises: adding a period of time to the measured latency to set the time out value in lines 50-53 of column 9. Pfister discloses the limitation of claims 3, 15, 21, and 33 that the period of time is a percentage of the measured latency in the same passage. The doubling of the SubnetTime in the equation of this passage is equivalent to adding a percentage (100%) to the measured latency (SubnetTime).

Regarding claims **4 and 22**:

Pfister discloses the limitation that the destination is a data processing system in lines 11-13, 43-44, and 50-53 all of column 3. These passages define a node as any of the devices in the SAN or connected to the SAN and indicate that any of them can be an end node (destination).

Similarly, regarding claims **5 and 23**:

Pfister discloses the limitation that the destination is a router in lines 11-13, 43-44, and 50-53 all of column 3.

Similarly, regarding claims **6 and 24**:

Pfister discloses the limitation that the destination is a switch in lines 11-13, 43-44, and 50-53 all of column 3.

Similarly, regarding claims **7 and 25**:

Pfister discloses the limitation that the data processing system is a switch in lines 11-13, 43-44, and 50-53 all of column 3.

Regarding claims **8-9 and 26-27**:

Pfister discloses the limitation that the identifying, routing, measuring, and setting steps are performed in response to an event and that the event is a periodic event in Figures 6 and 7, the event is the node sending data or a request across the network. In Figure 6, a series of events are performed successively and separated by a set amount of time.

Regarding claims **10 and 28**:

Pfister discloses the limitation that the time out value is used in the data processing system and the destination in the second embodiment of Figure 6.

Regarding claims **11 and 29**:

Pfister discloses the limitation that the computer implemented process is an error detection process in Figure 7; if the operation is not completed before the timer expires, an error must have occurred and the resources are returned in block 723.

Regarding claims **12 and 30**:

Pfister discloses the limitation that the computer implemented process is a timer process in the data processing system in block 715 of Figure 7.

Regarding claims **35 and 40**:

Pfister discloses the limitation that the bus system is a single bus in Figure 1; element 101 has a single bus.

Regarding claims **36 and 41**:

Pfister discloses the limitation that the bus system includes a primary bus and a secondary bus in Figure 1; element 103 has a main or primary bus on which the processor, memory, and SCSI components reside and another bus on which the disks 129 connect to the SCSI components.

Regarding claims **37 and 42**:

Pfister discloses the limitation that the processing unit includes a plurality of processors in element 101 of Figure 1.

Regarding claims **38 and 43**:

Pfister discloses the limitation that the communications unit is one of a modem and an Ethernet adapter in the HCA of Figure 1 which is a channel adapter and as such must modulate and demodulate the data in order to communicate with the switch as well as in element 123C of Figure 1 which is an Ethernet adapter.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- U.S. Patent Application Publication 2004/0037233 to Suzuki et al and U.S. Patent 6,728,809 to Suzuki et al disclose a time-out control apparatus.
- U.S. Patent 6,405,337 to Grohn et al discloses a system for adjusting a timeout for message retransmission based on measured round-trip communications delays.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert C. Scheibel whose telephone number is 571-272-3169. The examiner can normally be reached on Monday and Thursday from 6:30-5:00 Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RCS 8-4-05

Robert C. Scheibel
Examiner
Art Unit 2666

DANG TON
PRIMARY EXAMINER